

Note: Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark in that question.

- 1- The units of equilibrium constant K_c for reaction in the balance chemical equation $N_2 + 3H_2 \rightleftharpoons 2NH_3$ are:

- (a) mol dm^{-3} (b) $\text{mol}^{-1} \text{dm}^{-3}$
 (c) $\text{mol}^{-2} \text{dm}^6$ ✓ (d) No units

Reactions which have comparable amounts of reactants and products at equilibrium state have:

- (a) Very small K_c value
 (b) Very large K_c value
 (c) Moderate K_c value ✓
 (d) None of these

Potassium ferrocyanide $K_4[Fe(CN)_6]$ is:

- (a) Acidic salt (b) Basic salt
 (c) Double salt (d) Complex salt ✓

The conjugate acid of HPO_4^{2-} is:

- (a) PO_4^{3-} (b) $H_2PO_4^{2-}$
 (c) $H_2PO_4^-$ ✓ (d) H_3PO_4

The molecular formula of Decane is:

- (a) $C_{10}H_{22}$ ✓ (b) $C_{10}H_{20}$
 (c) $C_{10}H_{18}$ (d) $C_{10}H_{21}$

- 6- The oxidation of alkenes produce:
(a) Glyoxal (b) Glycol ✓
(c) Oxalic acid (d) Formic acid
- 7- The formula of stearic acid is:
(a) $C_{14}H_{31}COOH$ (b) $C_{15}H_{31}COOH$
(c) $C_{16}H_{31}COOH$ (d) $C_{17}H_{35}COOH$ ✓
- 8- Night-blindness is because of deficiency of:
(a) Vitamin A ✓ (b) Vitamin E
(c) Vitamin C (d) Vitamin D
- 9- Normally rainwater is weakly acidic because of:
(a) SO_3 gas (b) CO_2 gas ✓
(c) SO_2 gas (d) NO_2 gas
- 10- Specific heat capacity of water is:
(a) $4.2 \text{ KJg}^{-1} \text{ K}^{-1}$ (b) $4.2 \text{ Jg}^{-1} \text{ K}^{-1}$ ✓
(c) $2.4 \text{ Jg}^{-1} \text{ K}^{-1}$ (d) $2.4 \text{ KJg}^{-1} \text{ K}^{-1}$
- 11- Temporary hardness of water is due to:
(a) $Ca(HCO_3)_2$ ✓ (b) $CaCO_3$
(c) $MgCO_3$ (d) $MgSO_4$
- 12- The composition of carbon in fuel oil is:
(a) C_7 to C_{10} (b) C_{10} to C_{12}
(c) C_{13} to C_{15} (d) C_{15} to C_{18} ✓